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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Richard M. Czerwicz

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07/18/2005

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EXAMINER

NGUYEN, BINH QUOC

ART UNIT

PAPER NUMBER

2664

DATE MAILED: 07/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/942,388

Applicant(s)

CZERWIEC ET AL.

Examiner

Binh Q. Nguyen

Art Unit

2664

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07/10/1997.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-29 is/are allowed.
- 6) ☒ Claim(s) 1-13 and 30-35 is/are rejected.
- 7) ☒ Claim(s) 36-37 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/27/01, 04/02/04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claim 1-13, 32, and 35** are rejected under 35 U.S.C. 102(e) as being anticipated by *Gallegher et al* the US Patent No: (US 5,971,804), hereinafter referred to as *Gallegher*.

Regarding claim 1; *Gallegher* teaches a telecommunications rack (*see Fig. 4A*); for connection to an upstream network service provider for providing said service to downstream subscriber equipment also for connection to said rack, comprising:

a plurality of shelves (*see col. 13, lines 31-32*);, at least one shelf for connection to said upstream network service provider by means of network termination equipment, each shelf for connection to different equipment of said downstream subscriber equipment by means of line termination equipment (*see Fig. 7*), wherein each of said plurality of shelves has a same nonredundant feature (*see col. 13, lines 28-33*);

at least one pair of redundant line termination equipment, one line termination equipment of said pair for use in said at least one shelf in association with said same nonredundant feature thereof and a remaining line

termination equipment of said pair for use in another shelf of said plurality of shelves in association with said same nonredundant feature thereof (*see col. 11, lines 15-24*); and

means for connecting said at least one shelf and said another shelf for providing said same nonredundant feature redundantly(*see col. 16, lines 43-58*).

Regarding claim 2; *Gallegher* teaches the telecommunications rack of claim 1, wherein said same nonredundant feature is a shelf bus for interconnecting said network termination equipment and said line termination equipment (*see col. 16, lines 59-67*).

Regarding claim 3; *Gallegher* teaches a telecommunications system for connection to an upstream network service provider for providing said service to downstream subscriber equipment, comprising:

a hub (90) (*see Col. 16, lines 43-47: module "28" means hub(90)*), including network termination equipment (NT) for connection to said upstream network service provider and including line termination equipment (14a, . . . , 92, 94) connected to said network termination equipment for connection to different equipment of said downstream subscriber equipment (*see Col. 16, lines 48-53*); and

at least one remote device (96, 98) (*see Col. 6, lines 55-67*) connected to a line termination equipment (92, 94) of said hub, said remote device including network termination equipment for connection to said line termination equipment of said hub, and also for connection to line termination equipment (ADSL LT) of said remote device, wherein said line termination equipment of said remote device is for connection to said subscriber equipment by a plurality of twisted pairs (*see Col. 11, lines 1-17*).

Regarding claim 4; *Gallegher* teaches the telecommunications system of claim 3, wherein said line termination equipment (14a) of said hub includes line termination equipment for direct connection to subscriber premises by means of twisted pairs (116) (*see Col. 15, lines 46-64*).

Regarding claim 5; *Gallegher* teaches the telecommunications system of claim 3, wherein said network termination equipment of said at least one remote device is connected to aggregate line termination equipment of said hub corresponding to a transport mechanism used to interconnect said hub with said remote device (*see Col. 16, lines 43-58*).

Regarding claim 6; *Gallegher* teaches the telecommunications system of claim 3, wherein said hub (*see Col. 16, lines 43-47*) accommodates said line termination equipment as line termination cards for direct connection to subscriber premises and at least one aggregate line termination card for connection to said at least one remote device (*see Col. 6, lines 55-67*), wherein service classes in both cases are provided for subscribers by separate buffers per service class, each contending for upstream access to a hub bus for interconnecting said line termination equipment and said network termination equipment, wherein the service class buffers for said at least one aggregate line termination card have a cell priority equal to a sum of the aggregate cell priorities in each buffer or some percentage thereof, in order that subscriber premises connected to said at least one remote device are assigned a fair share of an operating bandwidth of the hub (*see Col. 9, lines 20-35*).

Regarding claim 7; *Gallegher* teaches the telecommunications system of claim 3, wherein said line termination equipment (14a, . . . , 92, 94, . . . , ADSL LT) includes buffers segregated by service class, wherein upstream packets or cells from said subscriber equipment contend for upstream access to a bus (IQ) interconnecting said line termination equipment to said network termination equipment, wherein said access is granted based on a priority assigned to each packet or upstream cell (*see Col. 9, lines 20-35*).

Regarding claim 8-9; *Gallegher* teaches the telecommunications system of claim 7, wherein said priority is a weighted priority based on a service class associated with said packet or cell (*see Col. 9, lines 20-35*).

Regarding claim 10-11; *Gallegher* teaches the system of claim 3, wherein said at least one remote device is

connected to said hub redundantly (*see Fig 7& 8, Col. 5, lines 21-34*).

Regarding claim 12; *Gallegher* teaches a telecommunications rack for connection to an upstream network service provider for providing said service to downstream subscriber equipment also for connection to said rack, comprising:

a plurality of shelves, at least one shelf for connection to said upstream network service provider by means of network termination equipment, each shelf for connection to different equipment of said downstream subscriber equipment by means of line termination equipment, wherein each of said plurality of shelves has a same nonredundant shelf bus for interconnecting said network termination equipment and said line termination equipment (*see Col. 13, lines 28-33*); and

a plurality of extender cards for use in all of said plurality of shelves, except one shelf in which said network termination equipment is used, wherein said extender cards substitute for said network termination equipment in each of said shelves except said one shelf having said network termination equipment, wherein said network termination equipment in said one shelf interconnects all of said line termination equipment in said rack to said upstream network service provider (*see Col. 9, lines 21-35*).

Regarding claim 13; *Gallegher* teaches a telecommunications shelf for mounting in a telecommunications rack of a telecommunications system for providing network services from an upstream network service provider to downstream subscriber equipment, comprising:

network termination equipment, for connection to said upstream network service provider (*see Fig. 8, Col. 6, lines 56-64*);

a backplane bus (*see Col. 15, lines 29-32*);

at least one pair of redundant line termination equipment for connection to said network termination equipment via said backplane bus and for connection to said downstream subscriber equipment (*see Col. 15, lines 33-45*).

Regarding claim 32; *Gallegher* teaches the telecommunications rack of claim 12, wherein said plurality of extender cards includes redundant extender cards for use in each of said plurality of shelves, wherein said network termination equipment includes redundant network termination cards in said one shelf having said network termination equipment, wherein a failure of a network termination card or extender card causes bank switching of all line termination cards from an active network termination extender string to a backup network termination extender string (*see Col. 11, lines 15-24*).

Regarding claim 35; *Gallegher* teaches a cabinet for use remotely from a central office for use in providing both broadband services and narrowband services to subscriber premises, comprising:

a backplane bus(*see Col. 15, lines 29-32*);

a network termination card connected to said backplane bus (*see Col. 16, lines 48-58*); and

a plurality of line termination cards connected to said backplane bus as well as to a plurality of lowpass filter cards also connected to said backplane bus and to customer premises equipment for providing both said broadband services via said line termination cards and said narrowband services via said lowpass filter cards, wherein said lowpass filter cards are connected to a central office and wherein said line termination cards are connected to a broadband network via said backplane bus and via said network termination card (*see Col. 16, lines 48-58*).

3. **Claim 33-34** are rejected under 35 U.S.C. 102(a) as being anticipated by *Sutherland et al* the US Patent No: (US 5,594,576), hereinafter referred to as *Sutherland*.

Regarding claim 33; *Sutherland teaches* a digital loop carrier (DLC) housing, comprising:

a DLC (*see Col. 9, lines 46-53*) remote terminal for providing plain old telephone service (POTS) (*see Col. 11, lines 7-14*);

a splitter shelf having a plurality of lowpass filters (LPFs) for providing said POTS to a connector (*see Col. 11, lines 29-36*);

a shelf including a network termination (NT) card for connection to a broadband switch, said NT card connected to a line termination card having a highpass filter for connection to said connector of said splitter shelf, wherein said connector is for connection to subscriber premises by means of a twisted copper pair (*see Col. 11, lines 36-47*).

Regarding claim 34; *Sutherland teaches* the DLC housing of claim 33, wherein said shelf has space for both line termination cards, network termination cards and lowpass filter cards in case said splitter shelf is not used and said POTS is connected directly to said shelf (*see Col. 11, lines 36-47*).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 30 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over ***Gallegher et al*** the US Patent No: (US 5,971,804), hereinafter referred to as ***Gallegher***.

Regarding claims 30-31; *Gallegher* teaches a system, comprising: a central office (100) including an asynchronous transfer mode (ATM) switch (104) connected to an ATM network (108), a central office switch (102) connected to a public switched telephone network (106) and a hub (90) connected to both said ATM switch and to said central office switch (*see Fig. 8, Col. 6, lines 55-64*);

Gallegher does not teaches subscriber equipment located at separate customer premises 118, each including both a digital subscriber line (DSL) modem (126) and a plain old telephone service (POTS) terminal (124) connected to said hub by a corresponding twisted copper pair, wherein both POTS and DSL services are provided on a plurality of separate twisted copper pairs to said separate customer premises (claim 30), and remote equipment (96) connected to said hub (90), said remote equipment for serving multiple customer premises with both POTS and DSL services (claim 31).

However, such elements are well known in the art of telecommunication. It would have been obvious substitution for the elements in the **Gallegher** design to one of ordinary skill in the art at the time of the invention in order to produce an efficient telecommunication network for customer premises, thus reducing the cost and complexity of the design.

Allowable Subject Matter

Claims 14-29 are allowable.

Claims 36, and 67 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

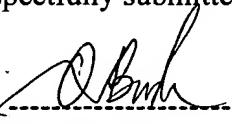
Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh Q. Nguyen whose telephone number is 571-272-8563. The examiner can normally be reached on M-F: 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully submitted,

By 

Binh Q. Nguyen
Patent Examiner
07/07/2005



WELLINGTON CHIN
SUPERVISORY PATENT EXAMINER